



Early Journal Content on JSTOR, Free to Anyone in the World

This article is one of nearly 500,000 scholarly works digitized and made freely available to everyone in the world by JSTOR.

Known as the Early Journal Content, this set of works include research articles, news, letters, and other writings published in more than 200 of the oldest leading academic journals. The works date from the mid-seventeenth to the early twentieth centuries.

We encourage people to read and share the Early Journal Content openly and to tell others that this resource exists. People may post this content online or redistribute in any way for non-commercial purposes.

Read more about Early Journal Content at <http://about.jstor.org/participate-jstor/individuals/early-journal-content>.

JSTOR is a digital library of academic journals, books, and primary source objects. JSTOR helps people discover, use, and build upon a wide range of content through a powerful research and teaching platform, and preserves this content for future generations. JSTOR is part of ITHAKA, a not-for-profit organization that also includes Ithaka S+R and Portico. For more information about JSTOR, please contact support@jstor.org.

MEDICAL PSYCHOLOGY.*

MR. DUNN is well known as one of our most industrious physiologists. A proof of this conclusion is to be found in the work before us, compiled during the frequent hasty leisures of an arduous professional life, and comprising some of the most florid expositions of the peculiar doctrines of the Idealist school of physiology. Mr. Dunn's generalizations to a great extent are connected with those of the phrenologist; we feel, however, that we should be doing him an injustice were we to classify them as phrenological. On the contrary, the influence of the school of Gratiolet is clearly manifest in some of Mr. Dunn's conclusions. The following is Mr. Dunn's classification of the various modes of nerve-action.

"Nervous actions are of a threefold character—physical, or *excito-motory*; sensory, or *sensori-motor*; and volitional, or *intelligent*. But it is only in the highest class—the vertebrata, and where there exists a cerebro-spinal system—that we recognize the existence and co-ordination of all these different kinds of nervous actions. In the very lowest animal organisms, the physical or excito-motory alone are present. These are essentially automatic, and occur without sensation; to them, in the invertebrate kingdom, and as typical of animal life, the sensory or sensori-motor are superadded; whilst it is solely in the vertebrate series that the intelligent and purely voluntary come into play. Throughout the whole of the vertebrate subkingdom, the type of the nervous system, including man himself, is the same. It admits of a threefold division, in accordance with its functional endowments and co-ordinations—into,

"1. The physical or excito-motory and reflex—the true spinal system of the late Dr. Marshall Hall.

"2. The nutritive and secretory, or ganglionic system, administering to the functions of animal life.

"The sentient, percipient, and intellectual, or the cerebro-spinal system."

As regards the brain, the conclusions of Leuret and Foville are thus adopted by Mr. Dunn.

"Throughout the whole of the vertebrate subkingdom, the type of the brain is the same; and, on a general survey of the series, it cannot escape observation that the longitudinal convolutions, from their

* *Medical Psychology*; comprising a brief Exposition of the leading Phenomena of the Mental States, and of the Nervous Apparatus through which they are manifested, with a view to the better understanding and Elucidation of the Mental Phenomena on the Symptoms of Disease. By Robert Dunn, F.R.C.S., England. 12mo. London, 1863.

first workings out, increase in number, volume, extension backwards, and in complexity of structure, as the animal rises in the scale of intelligence, and as the range of its perceptive activities widens. To unravel all the complexities of the intimate structure of the cerebral hemispheres has hitherto baffled the most eminent anatomists, with all the appliances that science can furnish; but Foville and Leuret have clearly shown that these hemispheres are chiefly made up of three distinct series of convolutions—the *longitudinal*, the *commisural* or *anastomosing*, and the *transverse series*. The longitudinal series are the first to be developed; and, according to Foville, they arise from a common central nucleus, the *locus perforatus*, and are closely banded together. It is indisputable that the internal convolutions are the primitive basement convolutions of the hemispheres, forming the broad lines of demarcation between the sensory and perceptive ganglia, between the sensational and perceptive apparatus; they are the central organs of the perceptive consciousness, and therefore the common portals to intellectual action and volitional power. Now, since these basement convolutions are the first developed, and as the whole series of longitudinal convolutions arising from the same central part are most intimately connected and associated with each other, and are commissurally banded together, my own mind rests in the conviction that *an unifying bond of action pervades them*, and that the entire series of longitudinal convolutions, as an aggregate or whole, constitutes the nervous apparatus of the perceptive consciousness—in other words, the instruments of all our immediate or intuitive cognitions; not only the seat of the perceptive faculties, through the instrumentality of which, by the inlets of the special senses, we acquire a knowledge of external existences, their sensible qualities and physical attributes—of the differences and relations of things, their order or arrangement and numbers, and the phenomena of their action or events; but also of those purely ideational activities which form constituent elements in the composite nature of the personal or individual and social affections, and of the emotional, moral, and religious feelings of man.”

We would remark on this passage, that we presume the longitudinal convolutions are developed in the Australian races and the Andaman Islanders; and we can only express our silent wonder how their “individual or social affections,” and “emotional, moral, and religious feelings,” are correlated with their brain development.

Mr. Dunn suggests what we believe to be a novel interpretation of the transverse convolutions of the brain.

“After further observation and reflection, I have been led to another generalization, for the establishment or refutation of which I would appeal to the observations of the naturalist, as well as to the anatomical researches of the comparative anatomist. My own mind, at present, rests on the conviction that the vesicular matter of the transverse convolutions on the surface of the hemispheres furnishes the material conditions, the substratum, for the manifestation of the

highest psychical activities : in other words, that the transverse series, as an aggregate or whole, is the nervous apparatus of the intellectual consciousness.

"It cannot be denied that the transverse are anatomically a distinct series of convolutions. They do not spring from the same central part as the longitudinal; they have not a common origin, nor any direct connexion with the *locus perforatus*, though the two series are most intimately connected and closely associated by a third, the commissural or anastomosing, through the instrumentality of which a co-ordinating and unifying action is maintained throughout the whole of the hemispherical ganglia. They are almost exclusively human, but not altogether and entirely so; still, wherever they do exist, as they manifestly do in the horse and the elephant, there we have unmistakeable evidence of the manifestation of *reasoning processes* being at times carried on. Now, as the longitudinal convolutions of the hemispheres increase in number, volume, and complexity of structure, in the same ratio as the perceptive activities of the animal increase in number, and as the range of their action is widened, so do I hold and believe that, on an appeal to nature, it will be found that the transverse convolutions, from their first appearance on the surface of the hemispheres, become more distinct and numerous as the animal rises in the scale of intellectual being, and as phenomena of the intellectual consciousness become more unequivocally manifested by it."

The differences between man and the inferior animals are thus defined by Mr. Dunn. Admitting that the sensory-apparatus of man are inferior in degree to those of the animals, Mr. Dunn alleges :

"But the difference between him and them rests specifically and fundamentally in the *greater number* and *higher order* of his psychical activities—in his intellectual, moral, and religious endowments, his reasoning and reflective powers; for the lower animals are alike destitute of the highest plane of perceptive development—of the frontal, towering, and backwardly extending convolutions—the seat of the moral and religious intuitions—the *sole prerogatives of man*; and, through the whole series, with some rare exceptions among the highest mammalia, of those characteristically large and deep, but unsymmetrical transverse convolutions on the surface of the hemispheres, 'adorning the human brow as with a diadem,' and which, as I believe, are the seat of the faculties of the intellectual consciousness—of imitation, imagination, ratiocination, and reflection—in fine, of the faculties of calculation, of order or arrangement, of comparison and causality, of ideality and wonder."

He further goes on to cite the parrot and the mocking-bird, the horse and the elephant, as examples of brains possessing "transverse convolutions on the *surface* of the hemispheres," and (if we understand him correctly) correlates this cerebral complication with the higher degree of mental energy manifested by these animals.

Into the purely pathological portions of this interesting little work

we shall not enter; we have no doubt that the medical profession, for which they are especially intended, will peruse them with the deepest interest. Mr. Dunn's previously published papers on "The Unity of the Human Race," conceived frequently in a spirit which transgresses the bounds of proved inductive science, illustrate a phase of anthropological thought which we believe is rapidly passing away. We, however, commend the present little work to the attention of our readers as one which places the theories of the physiological school, in which Mr. Dunn is a teacher, in a pleasant and palatable form before the public.

ON THE DISCOVERY OF SUPPOSED HUMAN REMAINS IN THE TOOL-BEARING DRIFT OF MOULIN-QUIGNON.

By ALFRED TYLOR, Esq., F.G.S., F.L.S.

A NOTICE of the discovery of human remains in the celebrated gravel-pit of Moulin-Quignon, near Abbeville, appears in *l'Abbevillois* of April 9th, 1863. The important details are as follows. At the end of last March a quarryman named Halatre, who was working in this quarry, brought M. Boucher de Perthes a shaped flint with a fragment of bone, both stated to have been found there. On clearing away the sand in which this fragment was imbedded, M. Boucher de Perthes found it to be a human molar much damaged. He immediately followed Halatre to Moulin-Quignon, verified the spot from which the hatchet and tooth had been taken, ascertained that the place was free from any infiltration or intrusion, and had the search continued, but for that day without success. Feeling sure that some other remains of the body to which this molar had belonged ought to be found there, M. Boucher de Perthes charged the workmen not to disturb anything they might come upon during his absence, but to let him know if anything came to light, and on the 28th of March a quarryman named Vasseur came to tell him that something resembling a bone was to be seen in the bed of gravel. M. Boucher de Perthes went to the place, found the extremity of the bone enveloped in its matrix, visible to the extent of nearly an inch: the bone was carefully extracted whole by working round it with a pickaxe, and proved to be a human jaw, very much discoloured, but not injured by rolling. The jaw, on a cursory inspection, showed no marked deviation from the ordinary type, was light, and not converted into phosphate of lime. A few inches off was a flint hatchet, also imbedded in the gravel, whence M. Oswald Dimpré removed it, but not without having to use a pickaxe in this case also. All the spectators were struck with the perfect identity of the patina or coloured crust which covered not only the jaw and the flint axes, but also the rolled pebbles of the bed, and the colour of which, a brown approaching to